WHAT IS CLAIMED IS:

1. A method of reducing interference in a received signal, the method comprising:

determining a normalized noise correlate using the received signal and a first channel estimate of the received signal;

determining conditional whitening-filter settings using the normalized noise correlate;

applying a whitening filter to the received signal in accordance with the conditional whitening-filter settings, the step of applying yielding an updated received signal;

performing a synchronization adjustment of the updated received signal, the step of performing the synchronization adjustment yielding an updated synchronization position; and

determining a second channel estimate using the updated synchronization position and the updated received signal.

2. The method of claim 1, further comprising:

providing a result of a synchronization adjustment of the received signal; and

determining a first channel estimate of the received signal using the result.

3. The method of claim 2, further comprising performing the synchronization adjustment of the received signal.

4. The method of claim 3, further comprising equalizing the updated received signal to yield a symbol estimate.

5. The method of claim 1, wherein:

the step of determining the conditional whitening-filter settings comprises suppressing the normalized noise correlate beyond an nth lag responsive to a determination that a normalized noise power is greater than a threshold value; and

n is a non-negative integer.

6. The method of claim 1, wherein the step of determining the conditional whitening-filter settings comprises:

comparing a zero lag of the normalized noise correlate to a threshold value; and

responsive to a result of the step of comparing, determining whether higher-order lags should be considered.

7. The method of claim 1, wherein the step of determining the conditional whitening-filter settings comprises:

if the square of the absolute value of a first lag of the normalized noise correlate is less than a first threshold value, setting no whitening filtering; and

if the absolute value of the first lag of the normalized noise correlate to the fourth power is less than a second threshold value, setting first-order whitening filtering.

8. The method of claim 7, wherein the step of determining the conditional whitening-filter settings comprises:

if the square of the absolute value of the normalized noise correlate is not less than the first threshold and the absolute value of the normalized noise correlate to the fourth power is not less than the second threshold, setting second-order whitening filtering.

9. The method of claim 1, wherein the step of determining the second channel estimate using the updated synchronization position and the updated received signal comprises producing a second channel estimate of the same span as the first channel estimate.

10. An apparatus for reducing interference in a received signal, the apparatus comprising:

means for determining a normalized noise correlate using the received signal and a first channel estimate of the received signal;

means for determining conditional whitening-filter settings using the normalized noise correlate;

means for applying a whitening filter to the received signal in accordance with the conditional whitening-filter settings to yield an updated received signal;

means for performing a synchronization adjustment of the updated received signal to yield an updated synchronization position; and

means for determining a second channel estimate using the updated synchronization position and the updated received signal.

11. The apparatus of claim 10, further comprising:

means for providing a result of a synchronization adjustment of the received signal; and

means for determining a first channel estimate of the received signal using the result.

12. The apparatus of claim 11, further comprising means for performing the synchronization adjustment of the received signal.

13. The apparatus of claim 12, further comprising means for equalizing the updated received signal to yield a symbol estimate.

14. The apparatus of claim 10, wherein:

the means for determining the conditional whitening-filter settings comprises means for suppressing the normalized correlate beyond an nth lag responsive to a determination that normalized noise power is greater than a threshold value; and

n is a non-negative integer.

15. The apparatus of claim 10, wherein the means for determining the conditional whitening-filter settings comprises:

means for comparing a zero lag of the normalized noise correlate to a threshold value; and

means for determining whether higher-order lags should be considered responsive to a result of the comparison.

16. The apparatus of claim 10, wherein the means for determining the conditional whitening-filter settings comprises:

means for setting no whitening filtering if the square of the absolute value of a first lag of the normalized noise correlate is less than a first threshold value; and

means for setting first-order whitening filtering if the absolute value of the first lag of the normalized noise correlate to the fourth power is less than a second threshold value.

17. The apparatus of claim 16, wherein the means for determining the conditional whitening-filter settings comprises:

means for setting second-order whitening filtering if the square of the absolute value of the normalized noise correlate is not less than the first threshold and the absolute value of the normalized noise correlate to the fourth power is not less than the second threshold.

18. The apparatus of claim 10, wherein the means for determining the second channel estimate using the updated synchronization position and the updated received signal comprises means for producing a second channel estimate of the same span as the first channel estimate.

19. The apparatus of claim 10, wherein the apparatus comprises a mobile station.

20. The apparatus of claim 10, wherein the apparatus comprises a base station.

21. The apparatus of claim 19, wherein the mobile station is compatible with GSM.

22. The apparatus of claim 20, wherein the base station is compatible with GSM.

23. An article of manufacture for reducing interference in a received signal, the article of manufacture comprising:

at least one computer readable medium;

processor instructions contained on the at least one computer readable medium, the processor instructions configured to be readable from the at least one computer readable medium by at least one processor and thereby cause the at least one processor to operate as to:

determine a normalized noise correlate using the received signal and a first channel estimate of the received signal;

determine conditional whitening-filter settings using the normalized noise correlate;

apply a whitening filter to the received signal in accordance with the conditional whitening-filter settings to yield an updated received signal;

perform a synchronization adjustment of the updated received signal to yield an updated synchronization position; and

determine a second channel estimate using the updated synchronization position and the updated received signal.